

Global Learning and Observations to Benefit the Environment (GLOBE)

Publisher: U.S. government

Developer: GLOBE (a partnership between NASA, NSF, EPA, the State Department, and various universities)

Grade levels: K–12

Scientific domain: Environmental science

Web site: <http://www.globe.gov>

Year profiled: 2002

GLOBE, developed in 1995, is a Web-based international environmental science and education program. Teachers are trained in methods of collecting field data that are designed to be compatible with inquiry and cooperative learning models. Elementary and secondary students investigate their local environment with a series of learning experiences and enter the data on the *GLOBE* Web site. Scientists and other students use this data to further their understanding of these areas.

SCOPE/CONTENT

The *GLOBE* curriculum gives students a chance to make measurements and interpret data as part of their investigations into a variety of environmental science concepts. Students make observations; collect, organize, and evaluate data; and communicate their findings.

FORMAT

GLOBE is divided into six investigation areas: Atmosphere, Hydrology, Soil, Land cover, Global positioning systems (GPS), and Earth systems. Each investigation contains a variety of learning activities developed at TERC and SRI International. Students collect data through these activities and are able to share their findings with others on the *GLOBE* Web site. Protocols are available for each investigation on the Web site in PDF format and downloadable video.

ASSESSMENT INSTRUMENTS

The assessment instruments were developed independently by SRI International and are accessible through the *GLOBE* Web site. They address the *Benchmarks for Science Literacy* (AAAS), the *National Science Education Standards* (NRC), the *TIMSS Study* (International Study Center at Boston College), and *The New Standards* (National Center on Education and the Economy). The assessment instruments provide tools for aligning the *GLOBE* curriculum within a state or district and provide templates, rubrics, and guided examples as tools for the teacher.

PROFESSIONAL DEVELOPMENT SUPPORT

For a school to participate in *GLOBE*, at least one teacher must be trained in the *GLOBE* measurement workshops. Workshop dates are listed on the Web site and take place throughout the country year-round. Scientists and developers are available through a virtual “help desk.” All participants have access to teacher guides and professional development videos and can take part in an online discussion forum for teachers.

STAND-ALONE VS. SUPPLEMENTAL

GLOBE contains a fairly comprehensive curriculum in ecological measurement for high school-level environmental science. Depending on the level of the class, the teacher will need to provide varying degrees of background materials.